

IN THE SPECIFICATION

1. Please amend the paragraph starting on page 4, line of the application as follows:

In addition to the conventional components of a mobile telephone, telephone MS1 further comprises a GPS receiver (GPS Rx) 24 connected to a GPS antenna 23 and controlled by a GPS microprocessor (GPS μ c) 25 receiving GPS spread spectrum signals transmitted from orbiting GPS satellites. When operative, the GPS receiver 24 may receive NAVSTAR SPS GPS signal through antenna 23 and pre-process them, typically by passive bandpass filtering in order to minimize out-of-band RF interference, preamplification, down conversion to an intermediate frequency (IF) and analog to digital conversion. The resultant, digested IF signal remains modulated, still containing all the information from the available satellites, and is fed into a memory of the GPS microprocessor 25. the GPS signals may the be acquired and tracked in any of several digital receive channels, typically up to 12, for the purpose of deriving pseudorange information from which the position of the mobile telephone can be determined using conventional navigation algorithms. Such methods for GPS signal acquisition and tracking are well known, for example, see chapter 4 (GPS satellite signal characteristics) & chapter 5 (GPS satellite signal acquisition and tracking) of GPS Principles and Applications (Editor, Kaplan ISBN 0-89006-793-7 Artech House. The GPS Microprocessor 25 may be implemented in the form a general purpose microprocessor, optionally common with the communications microprocessor 22, or a microprocessor embedded in a GPS application specific integrated circuit (ASIC).

2. Please amend the paragraph starting on page 7, line 1 of the application as follows:

In according with the present invention, the GPS processor 25 of mobile telephone MS1 may acquire incoming GPS signals as illustrated in the following example[;] .

3. Please amend the paragraph starting on page 7, line 28 of the application as follows:

Using one of the signals currently acquired currently acquired, the GPS processor 25 measures the variation in frequency of that signal as observed by the GPS receiver throughout the 100ms GPS signal sample. This may be done by either repetitively acquiring that signal using, say for example, several 10ms dwells throughout the 100ms sample sequence; or having ~~acquiring~~ acquired that signal using an initial 10 ms part of the 100ms sample sequence, tracking that signal though the 100ms sample sequence. The variations are typically attributable to local oscillator drift, the reference to which the frequencies are measured by the GPS receiver, and variations in Doppler shift attributable to both handsets and satellite movement.

4. Please amend the paragraph starting on page 8, line 3 of the application as follows:

The frequency variation profile may be modified to exclude those frequency variations attributable to Doppler shift ~~cause~~ caused by the movement of the satellite associated with the acquired signal which can be readily calculated from empheris data provided by the base station or from a previously acquired GPS signal, a position estimate such as one based on a last known position fix or a position fix provided by the communications base station, and a knowledge of GPS time which may be derived from on GPS satellite and a position fix estimate.

5. Please amend the paragraph starting on page 8, line 17 of the application as follows:

Using a dwell over the whole 100ms worth of GPS signal samples, the GPS processor 25 again sweeps only a narrowed range of frequencies in which a target PRN code is known to occupy. This time however, the correlation process employed to acquire that signal is modified in accordance with the frequency variation profile as modified after step (3). That is, the effects of handset movement and local oscillator drift are removed or at least mitigated. This is done in any of the following ways: prior to processing the data in a conventional, manner, mixing it with a signal 46, show in Figure 4, that represents the detected frequency variation; or instead of mixing the data with a fixed frequency offset signal as part of the conventional search mechanism, using a variable frequency signal, adjusted in such a way as to incorporate the measured frequency variation.